

$\Omega_c(2770)^0$

$I(J^P) = 0(\frac{3}{2}^+)$ Status: ***

The natural assignment is that this goes with the $\Sigma_c(2520)$ and $\Xi_c(2645)$ to complete the lowest mass $J^P = \frac{3}{2}^+$ SU(3) sextet, part of the SU(4) 20-plet that includes the $\Delta(1232)$. But J and P have not been measured.

$\Omega_c(2770)^0$ MASS

The mass is obtained from the mass-difference measurement that follows.

VALUE (MeV)	DOCUMENT ID
2768.3±3.0 OUR FIT	Error includes scale factor of 1.2.

$\Omega_c(2770)^0 - \Omega_c^0$ MASS DIFFERENCE

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
70.8±1.5 OUR FIT				
70.8±1.0±1.1	105 ± 22	AUBERT,BE	06l BABR	$e^+e^- \approx \Upsilon(4S)$

$\Omega_c(2770)^0$ DECAY MODES

The $\Omega_c(2770)^0 - \Omega_c^0$ mass difference is too small for any strong decay to occur.

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Omega_c^0 \gamma$	presumably 100%

$\Omega_c(2770)^0$ REFERENCES

AUBERT,BE	06l	PRL 97 232001	B. Aubert <i>et al.</i>	(BABAR Collab.)
-----------	-----	---------------	-------------------------	-----------------